



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,967	07/28/2003	Jeffrey Allen Nielsen	200309751-1	6185

22879 7590 05/15/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

RAO, G NAGESH

ART UNIT	PAPER NUMBER
----------	--------------

1722

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,967	Applicant(s) NIELSEN ET AL.	
	Examiner G. Nagesh Rao	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-16 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-16, and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1) Claims 17-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/29/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2) Claims 1, 3-16 and 26 are rejected under 35 U.S.C. 102 (e) as being anticipated by Schmidt (US Patent No. 6,841,116).

Schmidt 116 teaches a solid freeform fabrication apparatus as indicated by Figure 1, where the device shows a dispensing system capable of dispensing a variety of materials including a support material and build material stored in their own separate first and second compartments (49 and 50) before being dispensed by an ink-jet printing dispensing system (24) capable of being configured for uni or bi-directional printing onto a build platform (14), and a means for heating as well

as curing as seen in Figure 1 by the heaters (25) and the UV radiation source (38) of the build material (Col 15 Lines 38-45), as well a planarizer (32) which reads on as a type of milling device for surface texturing the 3-dimensional object fabricated as well as aiding in the removal and streamlining of excess waste material capable of doing so for either support or build material waste removal, and a computer system (34 and 40) as a control system capable of operating the controls for the dispensing and curing system (Also See Col 12 Lines 34-68 and Col 13 Lines 40-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- 3) Claims 7-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt (US Patent No. 6,841,116) in view of Cohen (US Patent No. 5,287,435).

Schmidt 116 from the aforementioned pertains to a solid freeform fabrication device that is used for 3-dimensional prototyping.

Schmidt 116 however it teaches a planarizer, but in an effort to strengthen the argument that the planarizer is equivalent to a milling system, and for the matter that a milling system is commonly known and used in the art, examiner presents the teachings of Cohen 435.

Cohen 435 depicts a freeform fabrication apparatus system (See Figures 1 and 2 and Col 10 Lines 64-68 and Col 11 Lines 1-5). Where it is commonly taught to incorporate a type of milling system where there is a vacuum unit and cutter capable of trimming and evening the surface of the layered material deposited by the freeform fabrication apparatus, as well removing the excess waste material from portion machined by the milling system.

It would be obvious at the time of the invention to one with ordinary skill in the art to incorporate the teachings of Schmidt 116 with the teachings of Cohen 435 with respect to a milling system would benefit the apparatus of Schmidt 116 to aid in the fabrication and trimming of excess material for a more finished product.

Response to Arguments

4) Applicant's arguments filed 4/27/06 have been fully considered but they are not persuasive.

Examiner would like to point out that Schmidt 116 teaches not only a dispensing system adapted to separately dispense build material and support material by further pointing out in Col 12 Lines 65-68, Col 13 Lines 1-6, and Col 14 Lines 22-35, whereby the device taught by Schmidt 116 teaches alternative embodiments that include having the ink-jet printing head having a plurality of discharge orifices, or better yet “Alternatively, multiple print heads could be used, each being dedicated to dispensing either or both of the materials.” Thus addressing applicant’s argument that the dispensing system need be adapted to separately dispense the build and support material.

The issue of concern lies in how the apparatus dispenses the build and support material, more so as to when or how it achieves this deposition. As well when the apparatus achieves its preferred curing means. It is understood that Schmidt 116 teaches an apparatus capable of dispensing the build and support material separately, along with a curing means (i.e. the UV radiation source), beyond all the other prescribed elements.

Applicant's argument is understood that Schmidt 116 has its system dispense the build and support material in a manner different from how applicant dispenses their set of materials. This limitation as addressed in claim 1 is related more to a recitation of intended use. This language limitation pertains to operator's desire of dispensing which material when, utilizing the apparatus to their specified desire. Schmidt 116 or Schmidt 116 in combination with Cohen 435 teaches every prescribed element and/or provides motivation for such that is capable of performing said claimed prescribed means as claimed by applicant.

Conclusion

5) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,


will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to G. Nagesh Rao whose telephone number is (571) 272-2946. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571)272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GNR


ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1800-1200
5/11/06